

SECTION 403 -- DIRECT BURIED WIRE AND CABLE

403.01 -- Description

1. The Contractor shall furnish and install direct buried electrical wire and cable of the size and type shown in the plans. This work includes the wire, cable, splices, connections, terminations, identification tags, trenching, backfilling, compacting, and all labor, equipment, tools, materials, and incidentals required to complete the work.

2. In some instances, the Contractor will be required to pick up and install utility supplied preducted cable. The size and type of cable, together with the pick up location, will be shown in the plans. Installation of the cable shall be according to guidelines issued by the utility.

403.02 -- Material Requirements

Direct buried cable and conductors for traffic signal and roadway lighting shall conform to the requirements of Section 1073. Cable used as a "neutral" shall be designated white or gray. Insulated equipment ground shall be green.

403.03 -- Construction Methods

1. The Contractor shall install the size and type of direct buried wire, cable, and preducted cable as shown in the plans.

2. The Contractor shall place the cables alongside the trench by moving the reel rather than pulling the cable from the reel and dragging the cable along the ground. Cables shall not be kinked or damaged during this operation.

3. The cables shall be lifted section by section and placed in the trench in such a manner as to prevent damage to the cables.

4. Cable shall be placed in trenches without dragging or stretching.

5. Cable shall be placed a minimum of 30 inches below ground level.

6. The bottom of the trench shall be firm and level. Sharp objects shall not protrude from the walls or the bottom of the trench.

7. Direct buried wire, cable, and preducted cable shall not be plow-pulled into place.

8. All trenches shall be backfilled as soon as practicable after placing the cable. The first lift of backfill material shall be a uniform thickness of approximately 6 inches. Care shall be exercised in compacting the backfill to prevent damage to the cable. The backfill shall be free of any material which could damage the cable. The remainder of the backfill shall be compacted to match the adjacent soil density so that the trench surface will remain level with the surrounding surfaces.

9. a. The cables shall be neatly trained to their destinations in cabinets, pole bases, pull boxes, and all other terminations.

b. The direction of each direct buried cable run shall be clearly identified with a stamped or embossed permanent plastic or non-ferrous metal tag at every point where the cable is accessible, such as in pull boxes, junction boxes, pole bases, transformer bases, and cabinets. A tag shall be attached to the conduit entrance bend whenever possible.

10. The minimum bending radii for cables or conductors less than 1 inch in diameter shall be 4 times the overall cable diameter. When using larger cables, the Contractor shall follow the ICEA recommended values. These limits do not apply to conduit bends.

11. Conduit bushings or bell ends shall be installed whenever the conductor enters or leaves a section of conduit or conduit bend.

403.04 -- Method of Measurement

Direct buried electrical wire, cable, and preducted cable shall be measured in linear feet from center to center of pull boxes, poles, junction boxes, cabinets, and controllers for each type and size shown in the plans.

403.05 -- Basis of Payment

- | 1. Pay Item | Pay Unit |
|---|------------------|
| 2/C _____ Detector Lead-in Cable, Direct Buried | Linear Foot (LF) |
| _____/C _____ Traffic Signal Cable, Direct Buried | Linear Foot (LF) |
| Service Cable, Direct Buried | Linear Foot (LF) |
| Direct Burial Cable, _____ | Linear Foot (LF) |
| Install Preducted Cable | Linear Foot (LF) |
2. Payment is full compensation for all work prescribed in this Section.